

Application No.: 10/607,206
Amdt. dated August 5, 2005
Reply to Final Office Action dated April 7, 2005

Docket No.: 8733.847.00

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Previously Presented) A liquid crystal display panel, comprising:
 - a plurality of gate lines;
 - a plurality of data lines crossing the plurality of gate lines;
 - a plurality of liquid crystal cells defined by the gate and data lines, wherein each liquid crystal cell comprises a thin film transistor at a crossing of the gate and data lines, and a pixel electrode connected to the thin film transistor at a first side portion;
 - a first parasitic capacitor formed between the plurality of data lines and pixel electrodes preceding adjacent ones of the plurality of data lines;
 - a second parasitic capacitor formed between the plurality of data lines and pixel electrodes succeeding adjacent ones of the plurality of data lines; and
 - a groove formed within a second side portion of the pixel electrode adjacent the plurality of data lines, wherein the second side portion is opposite the first side portion, so that the pixel electrode has a substantially diagonally symmetric shape.
2. (Original) The liquid crystal display panel according to claim 1, wherein the liquid crystal cells include:
 - a first horizontal line of liquid crystal cells having thin film transistors connected to preceding ones of adjacent data lines; and
 - a second horizontal line of liquid crystal cells having thin film transistors connected to successive ones of adjacent data lines.
3. (Original) The liquid crystal display panel according to claim 2, wherein the first horizontal line and the second horizontal line are alternately arranged within the liquid crystal display panel, and wherein within a vertical line of liquid crystal cells, every other liquid crystal cell is a liquid crystal cell from the first horizontal line.

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4. (Original) The liquid crystal display panel according to claim 2, wherein the first horizontal line and the second horizontal line are alternately arranged within the liquid crystal display panel, and wherein within a vertical line of liquid crystal cells, every two liquid crystal cells are liquid crystal cells from the first horizontal line.

5. (Original) The liquid crystal display panel according to claim 2, wherein within the first horizontal line, the groove is at the second portion of the pixel electrode adjacent a succeeding data line, and within the second horizontal line, the groove is at the second portion of the pixel electrode adjacent a preceding data line.

6. (Original) The liquid crystal display panel according to claim 2, wherein
within the first horizontal line, consecutive ones of the liquid crystal cells are charged with pixel signals having alternating, opposite polarities;
within the second horizontal line, consecutive ones of the liquid crystal cells are charged with pixel signals having alternating, opposite polarities; and
wherein within the first and second horizontal lines, consecutive ones of the liquid crystal cells arranged within a vertical line, are charged with pixel signals having alternating, opposite polarities.

7. (Original) The liquid crystal display panel according to claim 1, wherein a side length of the second portion of a first pixel electrode having the groove facing an adjacent data line is substantially equal to a side length of a portion of a second pixel electrode facing the adjacent data line.

8. (Original) The liquid crystal display panel according to claim 1, wherein the groove minimizes a parasitic capacitance differential between the first parasitic capacitor and the second parasitic capacitor.

9. (Currently Amended) A liquid crystal display panel, comprising:
a plurality of gate lines;

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a plurality of data lines crossing the plurality of gate lines; and
a plurality of liquid crystal cells arranged in a matrix pattern defined by the crossings, wherein each of the plurality of liquid crystal cells includes a pixel electrode and a thin film transistor coupled between an adjacent gate line, an adjacent data line, and the pixel electrode, wherein the pixel electrode has a groove formed in a portion of each of the pixel electrodes adjacent a data line opposite the adjacent data line, wherein the groove is formed at a diagonally opposite portion to the thin film transistor ~~substantially diagonally symmetric shape.~~

10. (Original) The liquid crystal display panel according to claim 9, wherein thin film transistors of consecutive ones of the plurality of liquid crystal cells arranged within a vertical line are alternately coupled to adjacent ones of the plurality of data lines.

11. (Original) The liquid crystal display panel according to claim 9, wherein thin film transistors of every two consecutively arranged ones of the plurality of liquid crystal cells arranged within a vertical line are alternately coupled to adjacent ones of the plurality of data lines.

12. (Original) The liquid crystal display panel according to claim 9, wherein thin film transistors of consecutive ones of the liquid crystal cells arranged within a first horizontal line are coupled to preceding ones of the plurality of data lines.

13. (Original) The liquid crystal display panel according to claim 9, wherein thin film transistors of consecutive ones of the liquid crystal cells arranged within a second horizontal line are coupled to succeeding ones of the plurality of data lines.

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14. (Original) The liquid crystal display panel according to claim 9, wherein consecutive ones of the liquid crystal cells arranged within a horizontal line are charged with data signals having opposite polarity.

15. (Original) The liquid crystal display panel according to claim 9, wherein a parasitic capacitance between the pair of pixel electrodes and the single data line are substantially equal.

16. (Canceled)

17. (Canceled)

18. (Withdrawn)

19. (Withdrawn)

20. (Original) The liquid crystal display panel according to claim 9, wherein the side of the pair of pixel electrodes has substantially the same length.

21. (Currently Amended) A liquid crystal display panel, comprising:
a plurality of consecutively arranged, substantially parallel data lines; and
a plurality of pixel electrodes arranged in a matrix pattern adjacent the plurality of data lines, wherein [[the]] each pixel electrode within the plurality has a cut-out portion facing an adjacent data line opposite to a thin film transistor, wherein the cutout portion is at a diagonally opposite portion of the pixel electrode to the thin film transistor substantially diagonally symmetric shape so that an area of side portions of the plurality of pixel electrodes adjacent the plurality of data lines is substantially equal.

22. (Canceled)

23. (Canceled)

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24. (Withdrawn)

25. (Withdrawn)

26. (Currently Amended) A liquid crystal display panel, comprising:
a plurality of consecutively arranged, substantially parallel data lines; and
a plurality of pixel electrodes arranged in a matrix pattern adjacent the plurality of data lines, wherein [[the]] each pixel electrode within the plurality has a groove facing an adjacent data line and a substantially diagonally symmetric shape so that a parasitic capacitance at side portions of the plurality of pixel electrodes adjacent the plurality of data lines is substantially equal.

27. (Currently Amended) A method of making a liquid crystal display panel,
comprising:
forming a plurality of consecutively arranged, substantially parallel data lines; and
forming a plurality of pixel electrodes arranged in a matrix pattern adjacent the plurality of data lines, wherein [[the]] each pixel electrode within the plurality has a groove facing an adjacent data line and a substantially diagonally symmetric shape so that a parasitic capacitance at side portions of the plurality of pixel electrodes adjacent the plurality of data lines is substantially equal.